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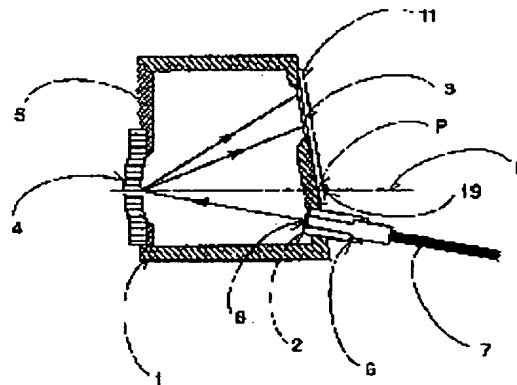
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## (54) SPECTROMETER

(57)Abstract:

**PROBLEM TO BE SOLVED:** To reduce the drift of a spectrum under heat to sufficiently small in practice while using a plastic material for a spectrometer for easy and economical assembly.

**SOLUTION:** A carrier 1, measuring beam projector 2 arranged in the carrier, diffraction grating 4, optical element, and a base plate 11 which supports a photoelectric detector fitted to the carrier, constitute a spectrometer. Here, a member for positioning a photoelectric detector on the base plate as well as the base plate to the carrier is provided to the carrier and base plate. The position of photoelectric detector on the base plate is so selected that the thermal expansion of the base plate compensates with an intermediate wavelength of a measurement spectrum. The temperature drift caused by the thermal



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expansion of the diffraction grating and carrier cancels the temperature drift of the base plate by selecting the thermal expansion coefficient of the plastic material for the diffraction grating and carrier, compensating the drift to the entire spectrum.

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